



REQUEST AND RECOMMENDATION

ONE YEAR OPTION

600- 719 Clock Hour Program – Precision Machining

Background:

To provide another option for adult students to apply prior learning toward a degree, Ohio legislators established what has come to be known as the One-Year-Option through Section 363.120 House Bill 59 of the 130th General Assembly. The Chancellor of the Ohio Department of Higher Education, in consultation with the Superintendent of Public Instruction and the Governor's Office of Workforce Transformation, was tasked to establish a One-Year Option credit articulation system in which graduates of Ohio's adult career-technical institutions who complete a 900-hour program of study AND obtain an industry-recognized credential approved by the Chancellor will be able to receive 30 technical semester credit hours toward a technical degree upon enrollment in a public institution of higher education. The Chancellor was also to recommend a process to award proportional semester credit hours for adult career-technical institution students who complete a program of study between 600 and 899 hours AND obtain an industry-recognized credential approved by the Chancellor. The Chancellor convened a broad group of stakeholders to develop a system of articulation for the One Year Option that was presented in a report to the legislature called, *"Getting to 30: Establishing a One Year Option Credit Articulation System for Ohio."*

In order to implement the system of articulation developed with the stakeholders as well as address accreditation requirements for degree granting institutions, the Chancellor convened Credit Affirmation Teams (CATs) to conduct a peer review of programs and certifications for affirmation for a block of 30 semester hours of technical credit. The CATs were comprised of faculty and administrators from Ohio Technical Centers (OTCs) and an equal number from public degree granting colleges and universities in Ohio. The CATs were organized by four discipline clusters: Health and Allied Health, Building and Industrial Technology, Business and Information Technology, and Services. They were charged with reviewing the certifications and, if necessary, program content, to affirm that students completing the selected program at an Ohio Technical Center and earned approved certifications had demonstrated competencies equivalent to technical credit. CATs affirmed that programs over 900 hours, articulated to a block of 30 technical credit hours. For programs between 600-899 credit hours, the review resulted in a proportional amount of credit hours being awarded. This technical credit would then be granted, as a block, upon enrollment in a degree granting institution. Additional subject matter experts were consulted when core team members did not have sufficient content knowledge of the program being reviewed.

Recommendation

As detailed in the attached template, the Building and Industrial Technology Credit Affirmation Team recommends that students will be eligible for a block of 20 semester hours of technical credit towards an *Associate of Technical Studies in Building and Industrial Technology* when:

- the student has successfully completed a 600- 719 clock hour program in Precision Machining at an Ohio Technical Center.

And currently holds the following credentials:

- Measurement, Materials and Safety
- Job Planning, Benchwork, & Layout
- OSHA 10 General Industry

And currently holds **FOUR** of the following credentials:

- Manual Milling Skills I
- Turning Operations: Turning Between Centers
- Turning Operations: Turning Chucking Skills
- Grinding Skills I
- Drill Press Skills I
- CNC Turning: Programming Setup & Operations
- CNC Milling: Programming Setup & Operations
- CNC Turning: Operations
- CNC Milling: Operations

Please note these certifications must be current and valid. Student must have completed an Ohio Technical Center program within 5 years.

One-Year Option
Certification Affirmation Template

End of Comment Period: May 24, 2017 at 3:45 PM
No comments received, recommend approval

RECOMMENDATION

The Vice Chancellor has verified that this institution has met the standards and requirements of the Ohio
Department of Higher Education.

S Davidson

Stephanie Davidson, Vice Chancellor of Academic Affairs

5/31/17

Date

APPROVAL

J Carey

John Carey, Chancellor

6/8/17

Date

mlc

One-Year Option
Certification Affirmation Template

The Program Affirmation Template is designed to provide a common matrix for a peer review process acceptable to the Higher Learning Commission to soundly affirm awarding technical credit for Ohio Technical Center graduates who are eligible for the One Year Option. The template should be completed for every program/subject and signed by the co-chairs of each of the four-cluster program areas for every Industry-recognized credential and program reviewed.

Please note: All Ohio Technical Centers must be accredited by one of the following: [Council on Occupational Education \(COE\)](#) and/or [Accrediting Commission of Career Schools and Colleges \(ACCSC\)](#).

Program Name: Machine Tooling Technology/Machinist CIP Code: 48.0501	Cluster <input type="checkbox"/> Business & Information Technologies <input type="checkbox"/> Health/Allied Health <input checked="" type="checkbox"/> Industrial Trades <input type="checkbox"/> Service Industries & Agriculture	
CIP CODE DEFINITION		
A program that prepares individuals to apply technical knowledge and skills to plan, manufacture, assemble, test, and repair parts, mechanisms, machines, and structures in which materials are cast, formed, shaped, molded, heat treated, cut, twisted, pressed, fused, stamped or worked.		
STEP ONE: CREDENTIAL REVIEW		
	Details/Explanation	Comments
Primary Industry Credential (if there are competing certifications complete page multiple times)	Name: National Institute for Metalworking Skills (NIMS): Machining Level 1 Type: <input type="checkbox"/> License <input type="checkbox"/> Registry <input checked="" type="checkbox"/> Certification	Students are required to obtain the following certifications: <ul style="list-style-type: none"> Measurement, Materials and Safety Job Planning, Benchwork, & Layout And at least 4 of the following certifications: <ul style="list-style-type: none"> Manual Milling Skills I Turning Operations: Turning Between Centers Turning Operations: Turing Chucking Skills Grinding Skills I Drill Press Skills I CNC Turning: Programming Setup & Operations CNC Milling: Programming Setup & Operations CNC Turning: Operations CNC Milling: Operations

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Certification Affirmation Template

<p>Program requirements by credentialing body.</p>	<p>The National Institute for Metalworking Skills (NIMS) was formed in 1995 by the metalworking trade associations to develop and maintain a globally competitive American workforce. NIMS sets skill standards for the industry, certifies individual skills against the standards and accredits training programs that meet NIMS quality requirements.</p> <p>Credential is earned by the student passing a standards-based assessment to test if the student has learned the theory components and a performance examination to test if the student can apply the theory in a practical assessment. NIMS Machining Level 1 contains 11 distinct credentials. Overall there are 52 NIMS Credentials</p>	<p>NIMS operates under rigorous and highly disciplined processes as the only developer of American National Standards for the nation's metalworking industry accredited by the American National Standards Institute (ANSI).</p> <p>Ohio Technical Center programs must be accredited by The National Institute Metal Working Skills, Inc. https://www.nims-skills.org/web/nims/5</p> <p>Complete Guide to NIMS Credentialing Program: Educational Programs. https://www.nims-skills.org/c/document_library/get_file?folderId=230729&name=DLFE-3805.pdf</p>
<p>Hour Requirements (includes any instructional, lab/practice hours, or internship hours).</p>	<p>Most trainees can acquire the core Level I Machining Skills in six months to one year of education and training, depending on prior manufacturing experience, basic academic skills, mechanical aptitudes, and the availability of laboratory-based training.</p>	<p>The National Institute for Metalworking Skills, Inc http://www.tssb.org/sites/default/files/wwwpages/repos/pdfiles/machinist1.pdf</p>
<p>Competencies demonstrated by credential attainment.</p>	<p>National Institute for Metal Skills: Machining Level 1</p> <ul style="list-style-type: none"> • Measurement, Materials and Safety • Job Planning, Benchwork, & Layout • Manual Milling Skills I • Turning Operations: Turning Between Centers • Turning Operations: Turing Chucking Skills • Grinding Skills I • Drill Press Skills I • CNC Turning: Programming Setup & Operations • CNC Milling: Programming Setup & Operations • CNC Turning: Operations • CNC Milling: Operations 	<p>Each equipment specific module typically contains operation, controls, maintenance, and safety guidelines.</p> <p>The National Institute Metal Working Skills, Inc https://www.nims-skills.org/c/document_library/get_file?folderId=230729&name=DLFE-3702.pdf</p>
<p>Rationale:</p>	<p>The Trades and Industry Credit Affirmation Team (CAT) utilized the following process to complete the assessment regarding the number of semester hours that would be awarded at the college level as block credit based on the</p>	

One-Year Option
Certification Affirmation Template

industry credentials plus 600-719 clock hours earned at an Ohio Technical Center (OTC).

- Research the competencies tested by the industry credential(s). The Trades and Industry credit affirmation team (CAT) reviewed information about the industry credential(s) to determine the competencies signaled by earning the credential(s).
- Complete a nationwide internet search to review how other accredited colleges and universities are applying credit to National Institute for Metal Skills: Machining Level 1. The Kansas Board of Regents awards up to 29 credit hours for completion of all 11 modules for NIMS Metalworking 1 toward an Associate of Applied Science degree.
- Review of other educational institutions using NIMS Metalworking 1. In Pennsylvania, all machining students are required to test for NIMS certifications. U.S. Army machinist trainees earn NIMS credentials. The Robert C. Byrd Institute requires NIMS credential for the earning of the Associate Degree in Manufacturing Technology.
- Review the value of local program advisory committee recommendations to meet the local industry needs. The Team concurred that there was value in having lab/practical, internships and/or externships as part of the program to meet local industry/business needs.
- Review OSHA 10-Hour Hazard Recognition Training for Construction. OSHA 10 includes content essential to general-related work such as fall protection, personal protective equipment, fire prevention and safety, OSHA inspection procedures and more.

The Trades and Industry CAT confirms:

- The certifications exams are valid, reliable, and peer-reviewed on a regular basis to ensure the content accurately measures intended competencies.
- The competencies measured by the NIMS Metalworking 1 and OSHA 10 certificate are developed by industry and reflect industry standards.

The Trades and Industry CAT also considered competencies signaled by lab and practical learning experiences. As part of the program offered by OTCs, student will participate in lab/practical experience as recommended by the local program advisory committee to meet local business and industry needs. The lab/practical experiences will reinforce the instructional competencies through hands-on learning.

The eleven modules included in NIMS: Level 1 were discussed, but the credit affirmation team determined that 600-719 clock hours would be insufficient time to teach all those modules. A longer clock hour program would likely consist of six to all eleven modules. The team concurred that there was value in having lab/practical, internships and/or externships as part of the program to meet local industry/business needs.

One-Year Option
Certification Affirmation Template

Upon successful completion of the 600-719 clock hour program in the field of machine tooling at an Ohio Technical Center and attainment of the following certifications:

- Students must obtain all of the below certifications:
 - NIMS Metalworking 1 - Measurement, Materials and Safety
 - NIMS Metalworking 1 - Job Planning, Benchwork, & Layout
 - OSHA 10 General Industry
- AND must obtain 4 of the following certifications:
 - NIMS Metalworking 1 - Manual Milling Skills I
 - NIMS Metalworking 1 - Turning Operations: Turning Between Centers
 - NIMS Metalworking 1 - Turning Operations: Turning Chucking Skills
 - NIMS Metalworking 1 - Grinding Skills I
 - NIMS Metalworking 1 - Drill Press Skills I
 - NIMS Metalworking 1 - CNC Turning: Programming Setup & Operations
 - NIMS Metalworking 1 - CNC Milling: Programming Setup & Operations
 - NIMS Metalworking 1 - CNC Turning: Operations
 - NIMS Metalworking 1 - CNC Milling: Operations

A student shall be awarded 20 technical semester hours towards completion of an Association of Technical Studies at a public degree granting college or university.

ONLY IF NECESSARY TO AFFIRM 20 CREDITS----STEP TWO: PROGRAM-RELATED COMPETENCIES OBTAINED OUTSIDE OF PRIMARY CREDENTIAL

	Details/Explanation	Comments
Additional related complementary credential(s) or badge(s) (e.g. OSHA 10, CPR).	OSHA 10-Hour: General Industry Certification	
Competencies demonstrated by additional credential attainment.	OSHA 10- Hour: General Industry: Mandatory - 7 hours of training <ul style="list-style-type: none"> • Introduction to OSHA • Walking and Working Surfaces, including fall protection • Exit Routes, Emergency Action Plans, Fire Prevention Plans, and Fire Protection • Electrical • Personal Protective Equipment 	Must be taught by a Certified OSHA Outreach Trainer. https://www.osha.gov/dte/outreach/program_requirements.pdf Used for all pathways. Elective and Optional components of the OSHA 10-Hour: General Industry Credential will be determined by local program

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	<ul style="list-style-type: none"> Hazard Communication <p>Elective - 2 hours of Training Must present at least two hours of training on the following topics. At least two topics must be presented. The minimum length of any topic is one-half hour.</p> <ul style="list-style-type: none"> Hazardous Materials Materials Handling Machine Guarding Introduction to Industrial Hygiene Bloodborne Pathogens Ergonomics Safety and Health Program Fall Protection <p>Optional - 1 hour of Training. Teach other general industry hazards or policies and/or expand on the mandatory or elective topics. The minimum length of any topic is one-half hour.</p>	advisory board.								
Description of additional program elements beyond primary credential.										
Program related competencies/learning outcomes outside of credential(s). Include how competencies are demonstrated.										
Other Parameters of Competency.										
Related Programs as of Fall 2016:	Ohio Technical Center Buckeye Career Center Cuyahoga Valley Career Center Four County Career Center	<table> <thead> <tr> <th>Program Name</th> <th>Clock Hours</th> </tr> </thead> <tbody> <tr> <td>Machine Shop</td> <td>600</td> </tr> <tr> <td>Machine Fabrication</td> <td>600</td> </tr> <tr> <td>Precision Machining</td> <td>684</td> </tr> </tbody> </table>	Program Name	Clock Hours	Machine Shop	600	Machine Fabrication	600	Precision Machining	684
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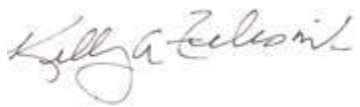
One-Year Option
Certification Affirmation Template

	Knox County Career Center	CNC Manufacturing Technologies	624
	Lorain County Career Center	Precision Machining	600
	Penta Career Center	Machinist/Machine Technologist	600
	Polaris Career Center	Precision-CNC Machine Technology	600
	Upper Valley Career Center	Precision Tooling and Machining	600

Committee Members and Subject Matter Experts:	Name Barbara Wagner Kelly Zelesnik Jon Buttelwerth Carrie Fife Carl Hilgarth Jeffrey Jones Larraine Kapka Mike Sizemore Greg Timberlake	Role Co-Chair Co-Chair Member Member Member Member Member Member Member	Institution Upper Valley Career Center Lorain County Community College Cincinnati State Technical and Community College Pickaway Ross Career & Technology Center Shawnee State University Ashland County West Holmes Career Center Sinclair Community College Miami Valley Career Technical Center North Central State College
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OTHER COMMENTS.	Material covered is adequate to allow 20 hours of credit to be granted.		
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AFFIRMED NUMBER OF TECHNICAL BLOCK CREDITS	20 semester hours	LENGTH OF TIME CREDENTIAL CAN BE USED FOR ONE-YEAR OPTION: Must have completed a 600-719 clock hour Precision Machining program at an Ohio Technical Center and meet requirements for one of the pathways as indicated on the cover sheet. All certifications must be current and valid. Must have completed the Ohio Technical Center program within 5 years.
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Co-chair signatures: <div style="text-align: center;">  Dr. Barbara G. A. Wagner, Adult Division Director Upper Valley Career Center – Ohio Technical Center </div>	<div style="text-align: center;">  Kelly A. Zelesnik, Dean of Engineering Technologies Lorain County Community College </div>
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Date: 5/5/2017